



022704

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Kie Y. Ahn et al.

Title: ATOMIC LAYER-DEPOSITED LaAlO₃ FILMS FOR GATE DIELECTRICS

Attorney Docket No.: 1303.050US2

Customer No.: 21186

PATENT APPLICATION TRANSMITTAL**MAIL STOP PATENT APPLICATION**

Commissioner for Patents

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We are transmitting herewith the following attached items and information (as indicated with an "X"):

Return postcard.

DIVISIONAL of prior Patent Application No.(10/137499) (under 37 CFR 1.53(b)) comprising:

Specification (38 pgs, including claims numbered 1 through 45 and a 1 page Abstract).

Formal Drawing(s) (8 sheets).

Copy of signed Declaration (6 pgs)from prior application.

Copy of Power of Attorney from prior application (1 pgs).

Incorporation by Reference: *The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied herewith, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.*

Check in the amount of \$1564.00 to pay the filing fee.

Prior application is assigned of record to Micron Technology, Inc..

Information Disclosure Statement (1 pgs), Form 1449 (7 pgs) References NOT enclosed, cited in prior application.

Communication Concerning Related Applications (4 pgs.).

The filing fee has been calculated below as follows:

	No. Filed	No. Extra	Rate	Fee
TOTAL CLAIMS	45-20	25	x 18.00 =	\$450.00
INDEPENDENT CLAIMS	7-3	4	x 86.00 =	\$344.00
[] MULTIPLE DEPENDENT CLAIMS PRESENTED				\$0.00
BASIC FEE				\$770.00
TOTAL				\$1564.00

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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer Number: 21186

By: David R. Cochran
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 Reg. No. 46,632

"Express Mail" mailing label number: EV299683847USDate of Deposit: February 27, 2004

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S/N Unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kie Y. Ahn et al.	Examiner:	Unknown
Serial No.:	Unknown	Group Art Unit:	Unknown
Filed:	Herewith	Docket:	1303.050US2
Title:	ATOMIC LAYER-DEPOSITED LAALO ₃ FILMS FOR GATE DIELECTRICS		

COMMUNICATION CONCERNING RELATED APPLICATION(S)

MS Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related application(s) in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
09/944981	August 30, 2001	1303.021US1	CRYSTALLINE OR AMOPHOUS MEDIUM-K GATE OXIDES, Y ₂ O ₃ AND Gd ₂ O ₃
09/945535	August 30, 2001	1303.026US1	HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO ₂
10/028643	December 20, 2001	1303.030US1	LOW-TEMPERATURE GROWN HIGH QUALITY ULTRA-THIN CoTiO ₃ GATE DIELECTRICS
10/052983	January 17, 2002	1303.031US1	HIGHLY RELIABLE AMORPHOUS HIGH-k GATE DIELECTRIC ZrO _x N _y
10/027315	December 20, 2001	1303.033US1	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS
09/797324	March 1, 2001	303.717US1	METHODS, SYSTEMS, AND APPARATUS FOR UNIFORM CHEMICAL-VAPOR DEPOSITIONS

10/099194	March 13, 2002	1303.044US1	EVAPORATION OF Y-Si-O FILMS FOR MEDIUM-k DIELECTRICS
10/081439	February 20, 2002	1303.046US1	EVAPORATED LaAlO ₃ FILMS FOR GATE DIELECTRICS
10/137058	May 2, 2002	303.802US1	ATOMIC LAYER DEPOSITION AND CONVERSION
10/137168	May 2, 2002	1303.048US1	METHODS FOR ATOMIC-LAYER DEPOSITION OF ALUMINUM OXIDES IN INTEGRATED CIRCUITS
10/137499	May 2, 2002	1303.050US1	ATOMIC LAYER-DEPOSITED LaAlO ₃ FILMS FOR GATE DIELECTRICS
10/163481	June 5, 2002	1303.056US1	ATOMIC LAYER-DEPOSITED HfAlO ₃ FILMS FOR GATE DIELECTRICS
10/163686	June 5, 2002	1303.059US1	Pr ₂ O ₃ -BASED La-oxide GATE DIELECTRICS
10/209581	July 30, 2002	1303.061US1	ATOMIC LAYER DEPOSITED NANOLAMINATES OF HfO ₂ /ZrO ₂ FILMS AS GATE DIELECTRICS
10/191336	July 8, 2002	1303.068US1	MEMORY UTILIZING OXIDE- CONDUCTOR NANOLAMINATES
10/219870	August 15, 2002	1303.069US1	LANTHANIDE DOPED TiO _x DIELECTRIC FILMS BY PLASMA OXIDATION
10/219878	August 15, 2002	1303.070US1	LANTHANIDE DOPED TiO _x DIELECTRIC FILMS
10/229903	August 28, 2002	1303.078US1	ATOMIC LAYER DEPOSITED HfSiON DIELECTRIC FILMS
10/233309	August 29, 2002	1303.079US1	ATOMIC LAYER DEPOSITED LANTHANIDE DOPED TiO _x DIELECTRIC FILMS

10/309583	December 4, 2002	1303.082US1	ATOMIC LAYER DEPOSITED ZR-SN-TI-O FILMS USING TiI ₄
10/309935	December 4, 2002	1303.083US1	ATOMIC LAYER DEPOSITED Zr-Sn-Ti-O FILMS
10/379470	March 4, 2003	1303.090US1	ATOMIC LAYER DEPOSITED DIELECTRIC LAYERS
10/403734	March 31, 2003	1303.092US1	ATOMIC LAYER DEPOSITED ZrAl _x O _y DIELECTRIC LAYERS
10/420307	April 22, 2003	1303.097US1	ATOMIC LAYER DEPOSITED ZrTiO ₄ FILMS
10/602323	June 24, 2003	1303.101US1	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRIC LAYERS
10/602315	June 24, 2003	1303.107US1	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRICS
09/779959	February 9, 2001		
09/838335	April 20, 2001		
09/881408	June 13, 2001		
09/908767	July 18, 2001		
10/765619	January 27, 2004	1303.033US2	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS
10/768597	January 30, 2004	1303.033US3	LOW-TEMPERATURE GROWN HIGH-QUALITY ULTRA-THIN PRASEODYMIUM GATE DIELECTRICS

Respectfully submitted,

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By Applicants' Representatives,

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